*When the snow falls the flakes / spin upon the long axis / that concerns them most intimately / two and two to make a dance ...* — William Carlos Williams

# Delphi and Java: Language Revolutions to Crown the 20th Century

Delphi is the crowning achievement of a programming environment revolution that began in 1983 when Turbo Pascal blasted us out of the CP/M command line and into the world of gorgeous IDEs (Integrated Development Environments). What a relief not to invoke a compiler and debugger from a command-line prompt. What a joy to have the cursor placed in the source code file at the position of the error with a useful explanation in a status bar. Even the assembly language demigods I rubbed desks with in those days were intrigued, while suggesting for weeks that Frank Borland and his cronies in some garage in Santa Cruz were promoting the hoax of the century.

But the rest, as they say, is history. And if Frank was promoting a hoax, it's still fool proof. Customizable speedy IDEs and programming languages have been sharing disk space for a decade, and we've been enjoying it. We enjoy it so much that we expect every new programming environment to have more than a few of our favorite things: code and string editors, object inspectors, project managers, built-in debuggers, component palettes, hooks to everything we can imagine, and so on. (Delphi… sigh…you gotta love it.)

But then, every now and then, something happens that shakes the foundations. This time the foundations are shaking from a revolution in the Online arena. Suddenly we're all drooling over the Internet, the World Wide Web, and Java. The hype is almost incredible, the enthusiasm contagious, the prospects staggering, and the products new and mostly as cyberspaced as cyberspace itself.

No…I haven't forgotten that there was a lot of hype about Windows 95. But that hype was mainly about an improvement in something we already knew about (Windows 3.x), not about something new and perhaps even a little crazy. The Internet and particularly the World Wide Web are attracting a kind of excitement and energy that was rampant in mid-80s PC development when hackers experimented with their computers and gave their code freely to the public domain. When it seemed like everyone had a new idea about modifying computers, designing peripherals, or generating code.

The new Net/Web hackers, like those early PC hackers, see opportunity and challenges everywhere they turn. Web hackers show their creations to the world. Anyone with a connection to the Net and a few tools can download a truckload of new nifty Net-Web applications for free. And everyone and their sisters want to be involved somehow, some way.

But perhaps the most telling aspect of the Web-o-lution, the clue that lets us know something really interesting is happening, is the enthusiasm the computing community has bestowed on Java.

**A taste of Java.** Java is both a general purpose programming language and a Web applet development language. Applets are Java programs (or applications) that you download from the Web with a browser such as Netscape 2.0 and run on your computer.

As a general purpose programming language, Java may be the answer to the prayers of frustrated C++ programmers everywhere. Java is based on C++ syntax, but is simpler and easier to use than C++, and it's portable across many platforms. Java developers can write an application once for any operating system and never need to port it — the Java applications you create on one platform will run without modification on other operating systems and computers. (Talk about a breath of fresh air.)

Java, like C++ and Delphi, is object-oriented and provides a run-time environment. Although Java is interpreted for faster prototyping and quicker development cycles, it's also robust and potentially quite high-performance. Many C++ programmers abandoned C++ because of the painful C++ compile-link-load-test-crash-debug-crash cycle.

Java applications are robust. The Java run-time system manages memory and garbage collection automatically. Multiple threading (which allows more than one flow of control within a single application) is built into the Java environment to allow CPU and resource intensive applications such as number crunchers and interactive graphics to process in the background while users perform other tasks.

Java applications are flexible, dynamic; they adapt to changing environments by dynamically downloading code modules throughout a network. Java can be used for stand-alone, Internet, and intranet application development. To run a Java applet for example, all one needs is a Java-compatible browser such as Hot Java or Netscape 2.0, or the Applet Viewer that comes with Sun Microsystems' JDK (Java Development Kit).

The Java run-time system has built-in protection against viruses and break-ins. In theory at least, end-users can feel secure downloading Java code from anywhere on the Internet.

**Java on the rocks.** But there is a rub, one I'm finding as a Java explorer, more than a little taxing. While Java might be the language of the future, Java development environments are a blast from the past. Java developers compile Java from the command line, and there's nothing to drag and drop. Although Java represents one future vision of programming, with respect to developer convenience, it's a vision of the past.

Although heavy hitters such as Borland have announced Java development tools, I've seen nothing yet that's better than Java extensions placed over a C++ environment. And speaking from the satisfied point of view of a Delphi programmer, I gotta say "no thanks." What Delphi programmer in his right mind wants to deal with a C++ environment? That's too many steps backward to get ahead.

But what to do? After all, I agree with the pack: the Web and Java are too exciting to ignore, even without a nice IDE. One solution, primitive yes, but better than Java straight at least, is Java on the Rocks, a little Java IDE I created (you guessed it) in Delphi to unprimitivise my Java development environment.

Java on the Rocks is an IDE composed of Delphi components (menu, edit boxes, option dialogs, etc.) that gives me a little room to develop and connects me a little less painfully to the DOS command line. Although Java on the Rocks is also primitive, it at least lets me explore Java without giving up all my hard-earned Delphi conveniences. Now I can enjoy the latest language revolution a bit less painfully.

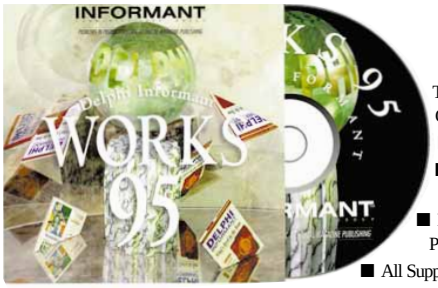
I'll describe the code and give it to you in an upcoming "The Way of Delphi." Meanwhile, I'm translating Java on the Rocks to Java and trying to decide whether Java or Delphi has more to offer explorers at the end of the 20th century.

Gary Entsminger is a Contributing Editor to *Delphi Informant*.

Table of CONTENTS

# The Must Have Reference Source For The Serious Delphi™ Developer

The Entire Text of Over 60 Technical Articles Appearing in Delphi™ Informant® in 1995




The Delphi™ Informant® Works 1995 CD-ROM Includes:

- Over 60 Technical Articles
- Text and Keyword Search Capability
- Improved Speed and Performance
- All Supporting Code and Sample Files
- 16-Page Color Booklet
- Electronic Version of *Delphi Power Tools* Catalog
- Electronic Version of *Borland C++ Power Tools* Catalog
- Third-Party Add-In Product Demos
- CompuServe Starter Kit with $15 Usage Credit.

A $105 Value Available Now for only

**$39.95**

California residents add 7¼% Sales Tax, plus $5 shipping & handling for US orders. (International orders add $15 shipping & handling)

## Call Now Toll Free 1-800-88-INFORM

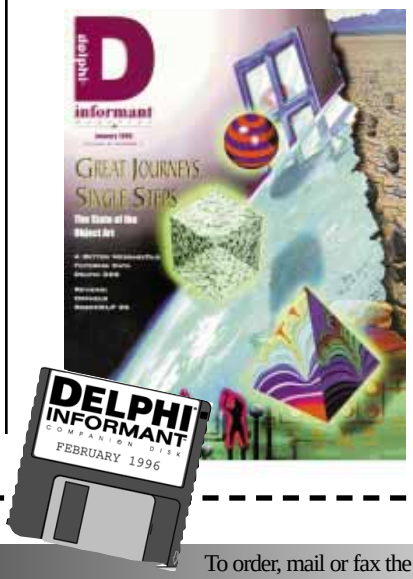
1-800-884-6367 Ask for offer # PI95 To order by mail, send check or Money Order to:
Informant Communications Group, Inc.
ATTN: Works CD offer # PI95
10519 E. Stockton Blvd, Suite 142 Elk Grove, CA 95624-9704
or Fax your order to
916-686-8497

# Get Informed!

Subscribe to Delphi Informant, The Complete Monthly Guide to Delphi Development and stay ahead of the rapid application development curve.

## Order Now and Get One Issue FREE!

For a limited time you can receive the first issue FREE plus 12 additional issues for only $49.95 That's nearly 25% off the yearly cover price!







Each big issue of *Delphi Informant* is packed with Delphi tips, techniques , news, and more!

- Client/Server Application Development
- Delphi Programming
- Using the Borland Database Engine
- Object -Oriented Programming
- Creating Reusable Components
- Product Reviews
- News from the Delphi Community
- Delphi User Group Information

## Payment Method...

- ❑ Check (payable to Informant Communications Group)
- ❑ Purchase Order-- Provide Number _____
- ❑ Visa
- ❑ Mastercard
- ❑ American Express

_____
Card Number

_____
Expiration Date

_____
Signature

### International rates

*Magazine-only*
$54.95/year to Canada
$74.95/year to Mexico
$79.95/year to all other countries

*Magazine AND Companion Disk Subscriptions*
$124.95/year to Canada
$154.95/year to Mexico
$179.95 to all other countries

California Residents add 7¼% sales tax on disk subscription

## ☐ YES

To order, mail or fax the form below or call (916) 686-6610 Fax: (916) 686-8497

I want to sharpen my Delphi Programming skills. I've checked the subscription plan I'm interested in below

☐ **Magazine-Only Subscription Plan...**
13 Issues Including One Bonus Issue at $49.95.

☐ **Magazine AND Companion Disk Subscription Plan...**
13 Issues and Disks Including One Bonus Issue and Disk at $119.95
*The Delphi Informant Companion Disk contains source code, support files, examples, utilities, samples, and more!*

☐ **Delphi Informant Works 1995 CD-ROM $39.95**
US residents add $5 shipping and handling. International customers add $15 shipping and handling.

Name _____

Company _____

Address _____

City _____ State _____ Zip Code _____

Country _____ Phone _____

FAX _____ e-Mail _____

PI95